

## NOTES ON THE ORTHOPTERA OF THE MIDDLE THAMES BASIN.

By L. R. A. GROVE, B.A., F.R.E.S.

In the British Association's Handbook to "The Natural History of the Oxford District" (1926), the late W. J. Lucas wrote concerning Orthoptera:—"In the past this Order has been much neglected, consequently records are comparatively few, and therefore, seeing what a diversity of surface and soil is to be found . . . in Oxon. and Berks., anyone taking up the study of the Order has much virgin soil in which to work." It was with these words in mind that the writer, helped by members of the Reading Museum Discussion Group, especially Mr C. Runge and Miss V. Smith, started to collect specimens and records to augment Lucas' list. Most of the material gathered is now in the Reading Museum.

The nomenclature used for the following records and notes is that set out in Dr Malcolm Burr's "British Grasshoppers and their Allies," 1936.

I must acknowledge help received from Dr Malcolm Burr, Mr K. H. Chapman and Mr W. A. Smallcombe.

## Order ORTHOPTERA.

## Sub-Order DICTYOPTERA.

1. *Ectobius lapponicus*, L.

Two examples from Pamber, collected by Charles Edward Collins, in July 1899. Dr Burr says of these:—"British specimens, and normal Europeans, are usually black, but these are red-brown, like the Serbian ones; Brunner calls the form *erythronata*."

2. *Ectobius lividus*, Fabr.

One from Pamber, C. E. Collins, 22.viii.1898. One from Mortimer Common, Berks., L.R.A.G., 22.iii.1936. One from Pamber, C. Runge, 19.vii.1936.

## ALIEN COCKROACHES.

1. *Blattella germanica*, L.

Several during September 1936 from the cellars of Huntley, Bourne & Stevens, Reading, per Dr Colgate.

2. *Blatta orientalis*, L.

One from Stoneham, no date. One from Royal Berks. Hospital, Reading, 3.vii.1936. Five from S. Reading house, with egg cases, 10.xi.1936. One from Reading Town Hall, 26.ix.1936.

3. *Periplaneta americana*, L.

Reading district?—no dates.

4. *Periplaneta australasiae*, Fabr.

One from Reading, C. E. Collins, 1899. Several brought from banana vans in Reading Station during August, September and October 1936.

5. *Panchlora cubensis*, Sauss.

One from Reading, 1914. One from a Reading fruit shop, 1935. One from Baylis' Warehouse, Reading, per Mr Runge, 13.x.1936.

6. *Nyetibora sericea*, Burm.

Two from banana vans in Reading Station, 27.viii.1936, 25.ix.1936.

7. *Nyctibora holosericea*, Burm.

One from a banana van in Reading Station, 1.x.1936.

## Sub-Order SALTATORIA.

Family 1: *Tetrigidae*.1. *Acrydium subulatum*, L.

One from Whiteknights, Reading, 1920, by Rev. S. O. Ridley. One from swampy ground west of the Flowing Spring, Playhatch, Oxon., by Mr Parsons, 23.ix.1936.

2. *Acrydium vittatum*, Zett.

One from Wokingham, by C. E. Collins, 19.iv.1899. One from Pamber Forest, 13.vii.1899. One on the surface of a pond on Mortimer Common, Berks., L.R.A.G., 22.iii.1936. Several from Pamber Forest—two-spotted and black non-spotted forms, 1936. Two from Chazey Wood, Mapledurham, L.R.A.G., 11.vi.1936, 1.vii.1936. One from Pamber, C. Runge, 19.vii.1936.

Family 2: *Acrididae*.1. *Omocestus viridulus*, L.

Several ♂ from Crookham, C. Runge and Miss V. Smith, 31.viii.1936. Several near Ruscombe Church, Berks., 31.viii.1936.

2. *Omocestus ventralis*, Zett. = *rufipes*, Zett.

One from Padworth, Berks., C. Runge and Miss V. Smith, 31.viii.1936.

3. *Myrmeleotettix maculatus*, Thunberg.

One from Pamber, 19.vii.1936. Several found in Pamber Forest later (1936).

4. *Chorthippus bicolor*, Charpentier.

Two from Pamber, 13.vii.1899. Noted in the Forbury, Reading, by Rev. S. O. Ridley, 1921. Purple form amongst lucerne, S. of Mapledurham Woods, Oxon., C. Runge, late Summer, 1935. Numbers at Caversham Mill, Oxon., L.R.A.G., 24.viii.1936. Two ♂ stridulating and fighting for 1 ♀ on S. slope of Hardwick Hill, Oxon., L.R.A.G., 13.ix.1936. Numbers on Streatley Hill, Berks., L.R.A.G., 4.x.1936. Numbers, with *C. parallelus*, on banks of Whitehall Plantation, Goring, Oxon., L.R.A.G., 4.x.1936.

5. *Chorthippus parallelus*, Zett.

Whiteknights, Reading. Rev. S. O. Ridley, no date. Bulmershe, Rev. S. O. Ridley, 1921. Burghfield Common, Rev. S. O. Ridley, 1921. Pamber, C. Runge, 19.vii.1936. Good number of ♀ on S. slope of Hardwick Hill, Oxon., L.R.A.G., 13.ix.1936. Streatley Hill, Berks., ♀, L.R.A.G., 4.x.1936. Grassy banks of Whitehall Plantation, Goring, alive with this and *Ch. bicolor*, L.R.A.G., 4.x.1936.

6. *Gomphocerus rufus*, L.

Three from S. slope of Hardwick ("Path") Hill, Oxon., L.R.A.G. and C. Runge, 13.ix.1936. First time recorded for Oxfordshire.

Family 3: *Gryllotalpidae*.*Gryllotalpa gryllotalpa*, L.

One found in a sack of Spanish Potatoes in Barker's grocery shop, Twyford, Berks., C. Scott, early 1935.

Family 4: *Gryllidae*.*Gryllulus domesticus*, L.

Mortimer, August 1896. Reading, 1911 and 1913. Early, near Reading, C. Runge, 1935.

Family 5: *Tettigoniidae*.1. *Leptophyes punctatissima*, Bosc.

One from Pamber, C. E. Collins, 10.vi.1899. One ♀ from Hall's Road, near Tilehurst Church, L.R.A.G., 22.vi.1935. Several ♀ from Pamber Forest, L.R.A.G., 5.vii.1936. One from Padworth, C. Runge and Miss V. Smith, 15.viii.1936. Two ♂ from Padworth, C. R. and Miss V.S., 31.viii.1936.

2. *Meconema thalassinum*, Fabr.

Pamber Forest, one small nymph, Spring 1936; several, C. Runge, 8.vi.1936, 19.vii.1936; several, L.R.A.G., 5.vii.1936. Hardwick Hill, Oxon., C. Runge beat one ♀ from an oak, 13.ix.1936. Padworth, one, C. Runge and Miss V. Smith, 30.viii.1936.

3. *Thamnotrizon cinereus*, L. = *Pholidoptera cinerea*, L.

One from Pamber, C. E. Collins, 13.vii.1899. One nymph, Hemdean Bottom, Caversham, L.R.A.G., early Summer, 1936. In plenty at Silchester (W. wall), L.R.A.G., 5.vii.1936. Several from Pamber, C. Runge, 19.vii.1936. Many heard stridulating at the bottom of Gravel Hill, Caversham, L.R.A.G., 23.viii.1936. Padworth, C. Runge and Miss V. Smith, 30.viii.1936. Several ♀ from house near Pppard Bowling Green, Miss V. Smith, 1.x.1936. Eggs were obtained from these. In plenty at Whitehall Plantation, Goring, L.R.A.G., 4.x.1936.

4. *Metrioptera brachyptera*, L.

Whiteknights, Reading, Rev. S. O. Ridley, 1919. Three from Pamber Forest, C. Runge, 19.vii.1936. Several from Crookham Marsh, C. Runge and Miss V. Smith, 30.viii.1936. One, kept in captivity at Reading Museum, was observed stridulating, 31.viii.1936. Of four listeners, one could hear the stridulation only up to a foot or so away, two could hear it at 5 or 6 feet, and one could not hear it at all.

5. *Tettigonia viridissima*, L.

Basildon, 1909. Hardwick Hill, Oxon., one ♂, C. Runge, August 1935. On 1.vii.1936 and 4.vii.1936, C. Runge brought into Reading Museum for observation respectively five ♀ and two ♂ and four ♀ and one ♂ nymphs from Hardwick Hill, Oxon. The following are my notes on these insects whilst they were kept together in one large breeding cage at the Museum:—

1.vii.1936. Eating *Forficula auricularia*. ♂ and ♀ nymphs both have two white lines running the length of the abdomen, about  $\frac{1}{4}$  in. apart. Both sexes covered with minute black spots.

5.vii.1936. A changed skin in the cage. One ♀ the victim of cannibalism. These two facts go together! Feeding on "meal worms" and earthworms.

20.vii.1936. Three ♀ and one ♂ left. The rest eaten.

- 24.vii.1936. One ♂ in last instar.  
 5.viii.1936. Two ♀ and one ♂ left. The male made its last change—a green globule conspicuous on back of the pronotum. Saw-fly larvae and small worms being eaten.  
 9-10.viii.1936. ♂ eaten, two ♀ left.  
 21.x.1936. Photographs (negatives now at the Museum) taken of one ♀ in the act of ovipositing. The other of the two Museum-reared females died 23.x.1936. She was opened and many eggs were taken from her. They were of two sorts, both of a dark honey colour and flattened dorsally. The larger were oval in plan and had a slight grooving up the middle. The smaller were lanceolate-leaf-shaped in plan.  
 13.ix.1936. The Hardwick Hill site was visited by C. Runge and L.R.A.G. to make field observations. The Great Greens had left their usual grass slope habitat and had gone into a field of flax. Many ♂ judging by the stridulating. One ♀ caught on a flax head.

## ALIENS.

*Jamaicana* sp.

Reading fruit shop, H. Dolton, no date. Reading fruit shop (crate of bananas), 4.ix.1935.

## NOTES ON THE WINTER FLIGHT, IN MILD CLIMATES, OF VERNAL AND AUTUMNAL MOTHS.

By E. P. WILTSHIRE, F.R.E.S.

Osthelder records *Cucullia wredowi-judaeorum*, Strand. from the Taurus in III and IV (*Mitt. Muench. Ent. Ges. e. V. XXIII.J 1933, Heft II, p. 51*), and compares this date with Sohn-Rethel's statement that *wredowi* is a winter moth. The exclamation-mark which he has written after this comparison leads me to think that the following notes may be of interest to readers in England and Europe, though rather obvious to those well acquainted with the Mediterranean fauna.

Winters on the Syrian and Palestinian coast are so mild that insect activity does not cease. The coldest months, January and February, are marked by heavy rainfall and storms, but rarely by frosts. Moths that in more strenuous climates fly in autumn and spring, here fly in the same season, winter; and larvae that elsewhere hibernate and feed chiefly in spring, here make no winter-pause but feed up rapidly. It is often only by the behaviour of a species away from this mild sea-coast that we can judge if a species be vernal or autumnal. This phenomenon occurs up to about 3500 feet on the seaward slopes of the Lebanon (and similarly in Palestine). Above this level, snowfalls occur in winter; and the vernal and autumnal moths occur, at these heights and in Inner Syria (which is cut off by the main range of the Lebanon from the sea's humid influence) more or less at their "normal" seasons, though this need not mean in the same month as in England. The same phenomenon must occur in many places in the Southern Mediterranean.